



US 20090115733A1

(19) **United States**(12) **Patent Application Publication**
MA et al.(10) **Pub. No.: US 2009/0115733 A1**(43) **Pub. Date: May 7, 2009**(54) **ELECTRONIC DEVICE AND TACTILE
TOUCH SCREEN****Publication Classification**(51) **Int. Cl.**
G06F 3/041 (2006.01)(52) **U.S. Cl.** 345/173(57) **ABSTRACT**(75) Inventors: **ZhongMing MA**, Waterloo (CA);
Robert LOWLES, Waterloo (CA);
Edward HUI, Waterloo (CA)

Correspondence Address:

BORDEN LADNER GERVAIS LLP
1200 WATERFRONT CENTRE, 200 BURNARD
ST., P.O. BOX 48600
VANCOUVER, BC V7X 1T2 (CA)(73) Assignee: **RESEARCH IN MOTION**
LIMITED, Waterloo (CA)(21) Appl. No.: **11/934,204**(22) Filed: **Nov. 2, 2007**

An electronic device includes a base, a touch screen display, a shape memory alloy and operational components. The touch screen display is connected to the base and moveable relative to the base and includes a display device and a touch-sensitive input surface overlying the display device and connected to a controller for determining a touch event to the touch-sensitive input surface. The shape memory alloy is disposed between the base and the display device and is configured to change shape in response to conduction of an electric current to cause movement of the display device relative to the base. The operational components include a processor between the base and the touch screen display. The processor is operatively connected to the controller, the display device and the shape memory alloy for causing conduction of current through the shape memory alloy in response to the touch event, resulting in movement of the display relative to the base.

